UNITED STATES SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549

SCHEDULE 13D/A

Under the Securities Exchange Act of 1934 (Amendment No. 1)*

Outlook Therapeutics, Inc.

(Name of Issuer)

Common Stock, par value \$0.01 per share (Title of Class of Securities)

69012T 206 (CUSIP Number)

GMS Ventures and Investments c/o Intertrust Corporate Services (Cayman) Limited 190 Elgin Avenue, George Town, Grand Cayman KYI-9007, Cayman Islands Telephone: +962 6 582 7999

with a copy to:

Shearman & Sterling LLP Bank of America Tower 800 Capitol Street, Suite 2200 Houston, TX 77002 Attention: Taylor Landry (713) 354-4900 (Name, Address and Telephone Number of Person

Authorized to Receive Notices and Communications)

December 28, 2022

(Date of Event Which Requires Filing of This Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of \$ 240.13d-1(e), 240.13d-1(f) or 240.13d-1(g), check the following box.

Note: Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See §240.13d-7 for other parties to whom copies are to be sent.

* The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page.

The information required on the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

| CUSIP No. 69012T 206 | | | | | | | |
|----------------------|---|--------|------------------------------|--|--|--|--|
| 1. | NAMES OF REPORTING PERSONS | | | | | | |
| | GMS Ventures and Investments | | | | | | |
| 2. | CHECK THE APPRO | OPRIAT | E BOX IF A MEMBER OF A GROUP | | | | |
| | | | | | | | |
| | (a) 🗆 | | | | | | |
| | | | | | | | |
| 3. | SEC USE ONLY | | | | | | |
| 4. | SOURCE OF FUNDS | | | | | | |
| | | | | | | | |
| | WC | | | | | | |
| 5. | CHECK B IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS $2(d)$ or $2(e)$ | | | | | | |
| 6. | CITIZENSHIP OR PLACE OF ORGANIZATION | | | | | | |
| | Cayman Islands | | | | | | |
| | | 7. | SOLE VOTING POWER | | | | |
| NUMBER OF | | | 0 | | | | |
| | SHARES | 8. | SHARED VOTING POWER | | | | |
| В | ENEFICIALLY | | | | | | |
| | OWNED BY | | 71,277,519 (1) | | | | |
| | EACH | 9. | SOLE DISPOSITIVE POWER | | | | |
| | REPORTING | | 0 | | | | |
| Р | ERSON WITH: | 10. | SHARED DISPOSITIVE POWER | | | | |
| | | | 71,277,519 (1) | | | | |
| 11. | AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON | | | | | | |
| | 71,277,519 (1) | | | | | | |
| 12. | CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES | | | | | | |
| | | | | | | | |
| 13. | PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) | | | | | | |
| | 27.9% (2) | | | | | | |
| 14. | TYPE OF REPORTING PERSON | | | | | | |
| | IV | | | | | | |
| | | | | | | | |

(1) Includes warrants (the "<u>Warrants</u>") to purchase up to an aggregate of 1,230,315 shares of common stock, par value \$0.01 per share (the "<u>Shares</u>"), of Outlook Therapeutics, Inc., a Delaware corporation (the "<u>Issuer</u>").

(2) This percentage is calculated based upon 254,403,550 Shares outstanding immediately following the December 2022 Offering (as defined below), based on the Issuer's prospectus supplement relating to the December 2022 Offering filed with the Securities and Exchange Commission (the "SEC") on December 23, 2022, plus 1,230,315 Shares underlying the Warrants.

Page 2 of 6 Pages

| CUSI | P No. 69012T 206 | | | | | | |
|------|--|---|---|--|--|--|--|
| 1. | NAMES OF REPORTING PERSONS | | | | | | |
| | Ghiath M. Sukhtia | n | | | | | |
| 2. | CHECK THE APP | CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP | | | | | |
| | | | | | | | |
| | (a) 🗆 | | | | | | |
| | (b) 🗵 | | | | | | |
| 3. | SEC USE ONLY | SEC USE ONLY | | | | | |
| 4. | SOURCE OF FUNDS | | | | | | |
| | | | | | | | |
| | N/A | | | | | | |
| 5. | CHECK B IF DISC | CHECK B IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e) | | | | | |
| 6. | CITIZENSHIP OR | PLACE (| OF ORGANIZATION | | | | |
| | Jordan | | | | | | |
| | NUMBER OF SHARES BENEFICIALLY OWNED BY | 7. | SOLE VOTING POWER | | | | |
| | | | 0 | | | | |
| | | 8. | SHARED VOTING POWER | | | | |
| | | | 71,277,519 (1) | | | | |
| | EACH | 9. | SOLE DISPOSITIVE POWER | | | | |
| | REPORTING | | 0 | | | | |
| | PERSON WITH: | 10. | SHARED DISPOSITIVE POWER | | | | |
| | TERBOIT WITH. | | 71,277,519 (1) | | | | |
| 11. | AGGREGATE AM | AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON | | | | | |
| | 71,277,519 (1) | | | | | | |
| 12. | | HE AGG | REGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES | | | | |
| | | | | | | | |
| 13. | PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) | | | | | | |
| | 27.9% (2) | | | | | | |
| 14. | TYPE OF REPORTING PERSON | | | | | | |
| | IN | | | | | | |

(1) Includes Warrants to purchase up to an aggregate of 1,230,315 Shares.

(2) This percentage is calculated based upon 254,403,550 Shares outstanding immediately following the December 2022 Offering, based on the Issuer's prospectus supplement relating to the December 2022 Offering filed with the SEC on December 23, 2022, plus 1,230,315 Shares underlying the Warrants.

Page 3 of 6 Pages

This Amendment No. 1 ("<u>Amendment No. 1</u>") to Schedule 13D supplements and amends the statement on Schedule 13D of GMS Ventures and Investments ("<u>GMS Ventures</u>") and Ghiath M. Sukhtian ("<u>Sukhtian</u>" and, together with GMS Ventures, the "<u>Reporting Persons</u>") originally filed with the SEC on July 7, 2022 (together, as so amended, the "<u>Schedule 13D</u>"). Except as otherwise specified in this Amendment No. 1, all items in the Schedule 13D remain unchanged. All capitalized terms used herein and not otherwise defined have the meanings ascribed to such terms in the Schedule 13D.

The Reporting Persons are filing this Amendment No. 1 to report certain changes in their beneficial ownership of Shares of the Issuer as result of the December 2022 Share Purchase, as described in Item 4 of this Schedule 13D.

Item 3. Source and Amount of Funds or Other Consideration.

The response to Item 3 in the Schedule 13D is hereby amended to add the following after the last paragraph:

The source of funds for the December 2022 Share Purchase (as defined below) was the working capital of GMS Ventures and capital contributions made to GMS Ventures.

Item 4. Purpose of Transaction

Item 4 of the Schedule 13D is hereby amended to add the following after the last paragraph:

On December 23, 2022, the Issuer announced the sale of an aggregate of 28,460,831 Shares to certain institutional and accredited investors in a registered direct offering (the "<u>December 2022 Offering</u>"). As part of the December 2022 Offering, GMS Ventures entered into a securities purchase agreement with the Issuer (the "<u>December 2022 SPA</u>") pursuant to which the Issuer agreed to sell, and GMS Ventures agreed to purchase, 14,230,418 Shares at the public offering price of \$0.8784 per Share, for an aggregate purchase price of approximately \$12.5 million, subject to customary closing conditions (the "<u>December 2022 Share Purchase</u>"). The December 2022 Offering closed on December 28, 2022.

Item 5. Interest in Securities of the Issuer

Item 5 of the Schedule 13D is hereby amended and restated in its entirety to read:

(a)–(b)

The following disclosure is based upon 254,403,550 Shares outstanding immediately following the December 2022 Offering, based on the Issuer's prospectus supplement relating to the December 2022 Offering filed with the SEC on December 23, 2022, plus 1,230,315 Shares underlying the Warrants.

A. GMS Ventures:

- (a) As of the date hereof, GMS Ventures directly owns 70,047,204 Shares and Warrants to purchase 1,230,315 Shares, representing a total of 71,277,519 Shares beneficially owned by GMS Ventures. This represents approximately 27.9% of the outstanding Shares calculated pursuant to Rule 13d-3 under the Act.
- (b) 1. Sole power to vote or direct vote: 0
 - 2. Shared power to vote or direct vote: 71,277,519
 - 3. Sole power to dispose or direct the disposition: 0
 - 4. Shared power to dispose or direct the disposition: 71,277,519

Page 4 of 6 Pages

- B. Sukhtian:
 - (a) Sukhtian is the holder of a controlling interest in GMS Holdings, which is the sole owner of GMS Ventures. By virtue of such relationship, Sukhtian may be deemed to beneficially own the securities held by GMS Ventures for purposes of Rule 13d-3 under the Act. This represents approximately 27.9% of the outstanding Shares calculated pursuant to Rule 13d-3 under the Act.
 - (b) 1. Sole power to vote or direct vote: 0
 - 2. Shared power to vote or direct vote: 71,277,519
 - 3. Sole power to dispose or direct the disposition: 0
 - 4. Shared power to dispose or direct the disposition: 71,277,519
- (c) The description of the December 2022 Share Purchase in Item 4 is incorporated herein by reference. Other than the December 2022 Share Purchase, the Reporting Persons have not effected any transactions in the Shares during the past sixty (60) days.
- (d) Not applicable.
- (e) Not applicable.

Item 6. Contracts, Arrangements, Understandings or Relationships with respect to Securities of the Issuer

Item 6 of the Schedule 13D is hereby amended to add the following after the last paragraph:

December 2022 Share Purchase Agreement

Item 4 above summarizes certain provisions of the December 2022 SPA and is incorporated herein by reference. The description of the December 2022 SPA does not purport to be complete and is qualified in its entirety by reference to the full text of the December 2022 SPA, the form of which is filed as Exhibit 6 to this Schedule 13D, and is incorporated herein by reference.

| Item 7. | Material to be Filed as Exhibits | | | | | |
|---------|---|--|--|--|--|--|
| Exhibit | Description | | | | | |
| 1. | Joint Filing Agreement, between Ghiath M. Sukhtian and GMS Ventures and Investments, dated December 29, 2022.* | | | | | |
| 2. | Amended & Restated Investor Rights Agreement by and between Outlook Therapeutics, Inc. and GMS Ventures and Investments, dated as of April 21, 2022 (incorporated by reference to Exhibit 10.1 to the Issuer's Form 8-K, filed with the SEC on April 22, 2022). | | | | | |
| 3. | Form of Common Stock Purchase Warrant of Outlook Therapeutics, Inc. (incorporated by reference to Exhibit 4.2 of to the Issuer's Form 8-K, filed with the SEC on February 24, 2020). | | | | | |
| 4. | Power of Attorney by Ghiath M. Sukhtian, dated as of December 30, 2019 (incorporated by reference to Exhibit 24.4 to the Form 4 filed by Ghiath M. Sukhtian with the SEC on January 29, 2020). | | | | | |
| 5. | Power of Attorney by GMS Ventures and Investments, dated as of February 25, 2020 (incorporated by reference to Exhibit 24.1 to the Form 3 filed by GMS Ventures and Investments with the SEC on February 27, 2020). | | | | | |
| 6. | Form of Securities Purchase Agreement, dated as of December 23, 2022, by and between the Issuer and certain purchasers named therein (incorporated by reference to Exhibit 10.1 to the Issuer's Form 8-K, filed with the SEC on December 23, 2022). | | | | | |
| | | | | | | |

Filed herewith.

Page 5 of 6 Pages

SIGNATURES

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

Dated: December 29, 2022

GMS Ventures and Investments

By: /s/ Lawrence A. Kenyon Name: Lawrence A. Kenyon Title: Attorney-in-Fact

Ghiath M. Sukhtian

By: /s/ Lawrence A. Kenyon Name: Lawrence A. Kenyon Title: Attorney-in-Fact

JOINT FILING AGREEMENT

The undersigned hereby agree that this Statement on Schedule 13D, dated December 29, 2022 (the "<u>Schedule 13D</u>"), with respect to the common stock, par value \$0.01 per share, of Outlook Therapeutics, Inc. is filed on behalf of each of us pursuant to and in accordance with the provisions of Rule 13d-1(k) under the Securities and Exchange Act of 1934, as amended, and that this Joint Filing Agreement (this "<u>Agreement</u>") shall be included as an Exhibit to the Schedule 13D. Each of the undersigned agrees to be responsible for the timely filing of the Schedule 13D, and for the completeness and accuracy of the information concerning itself contained therein. This Agreement may be executed in any number of counterparts, all of which taken together shall constitute one and the same instrument.

IN WITNESS WHEREOF, the undersigned have executed this Agreement as of the 29th day of December, 2022.

GMS Ventures and Investments

By: /s/ Lawrence A. Kenyon Name: Lawrence A. Kenyon Title: Attorney-in-Fact

Ghiath M. Sukhtian

By: /s/ Lawrence A. Kenyon

Name: Lawrence A. Kenyon Title: Attorney-in-Fact